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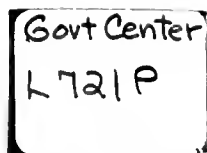
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PRELIMINARY ESTIMATE OF
THE COST OF A NEW CITY HALL

Report to
THE CITY OF BOSTON

May 20, 1958
C-61340



Arthur D. Little, Inc.

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THE CITY
OF BOSTON**

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We wish to acknowledge the valuable contributions to our work by the following consultants:

SHEPLEY, BULFINCH, RICHARDSON AND ABBOTT	Architects	Boston
JOSEPH C. SKINNER	Appraiser	Boston
ARTHUR WILCOX	Appraiser	Boston
THOMAS M. HORAN	Appraiser	Boston
GEORGE A. FULLER COMPANY	General Contractors	Boston
EVANS AND ASSOCIATES	Management Engineers	Boston

We also wish to thank the many Boston city officials and civic leaders who have made their time available to us and provided information and opinions.

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I. SUMMARY

A. PURPOSE AND SCOPE

The principal purpose of this report is to provide the City of Boston with a preliminary estimate of the space requirements, as well as the approximate size and cost of a new City Hall. Coincidentally, we have broadly considered the physical condition and operating efficiency of the space presently occupied by the executive departments of the city's government, the feasibility and approximate cost of rehabilitating that portion owned by the city, and the relationship of a new City Hall to the proposed Government Center Project.

In accomplishing this purpose within the time available the scope of the study was defined further, as follows:

Size of the Proposed New City Hall

Among the basic determinants of the size of a new public building are: (a) the departments and personnel to be housed, (b) the space required by these departments and personnel to perform their functions efficiently, and (c) allowances for future growth.

In selecting departments and activities to be housed in the proposed new City Hall, we have relied mainly upon the judgment of city officials. With respect to certain departments, we have also sought the opinion of experienced civic leaders. We have supplemented these opinions with our own analyses of departmental functions and interrelationships.

The estimated space requirements of each department have been based upon: (a) the amount and types of space now being used, (b) departmental estimates of space requirements, and (c) application of selected space utilization standards.

In estimating the approximate size of the new building no specific space allowances have been made for future growth. We have provided for general expansion by envisioning a building designed for maximum flexibility of space utilization and appropriate future additions. Our analysis of space requirements and building specifications has been carried to the point necessary to derive a preliminary estimate of the total building cost.

Offsetting Revenues

If a new City Hall is erected, certain capital gains and possible out-of-pocket savings may partially offset the cost of the building. Among these are proceeds from the sale of vacated city-owned properties and possible savings in operating costs. To estimate these revenues we have had the several properties assessed by a team of highly qualified appraisers; and have compared the operating and maintenance costs of the present space with estimates of similar costs for the proposed new structure.

Limitations

The limited scope of this assignment excluded: (a) determination of the cost to the city of obtaining land for the site, (b) consideration of methods and cost of financing the new building, (c) a management efficiency study of the city government, and (d) the effect of a new City Hall or the Government Center Project on the city's general financial position.

B. CONCLUSIONS

Our examination of Boston's municipal space situation and our findings as to current requirements and costs have been necessarily approximate. We believe, however, that within the framework of the assumptions and methods employed in the course of this study, the conclusions summarized below are sound and provide a reasonable basis for preliminary planning.

Summary of Building Program

Basic Program

Agencies Included	Those presently housed in the City Hall and Annex
	Law Department Health Division Veterans' Services Department
Net Office Space Presently Occupied	188, 790 net sq ft
Net Office Space Required in New Building	196, 730 net sq ft
Increase	7, 940 sq ft or 4 percent

Basic Program (Continued)

Gross Area of Present Space	312, 973 sq ft
Gross Area of New Building	368, 730 sq ft
Estimated Construction Cost	\$10, 900, 000
Estimated Cost per Gross Sq Ft	\$29. 56
Additional Building Costs (architectural and engineering fees, landscaping, furnishings, etc.)	\$1, 427, 000
Total Estimated Building Cost	\$12, 327, 000
Estimated Offsetting Credits:	
Sale of Vacated Properties	\$1, 650, 000
Annual Savings, Operations and Maintenance	\$29, 961
Discontinued Rentals - Annual	\$50, 440

Alternative Additions to the Basic Program

Alternative A:

Agencies Included	Executive Staffs of the Fire Department and Boston Traffic Commission Boston Licensing Board Boston Housing Authority Boston Redevelopment Authority
Additional Office Space Required	27, 500 net sq ft
Additional Gross Area	39, 700 sq ft
Construction Cost, Additional Space	\$1, 174, 000

Alternative Additions to the Basic Program (Continued)

Alternative A:

Total Building Cost, Additional Space	\$1,315,000
---------------------------------------	-------------

Additional Offsetting Credits:

Discontinued Rentals Annual	\$53,225
-----------------------------	----------

Alternative B:

Agencies Included	School Committee School Buildings Department
-------------------	---

Additional Office Space Required	71,800 net sq ft
----------------------------------	------------------

Additional Gross Area	100,500 sq ft
-----------------------	---------------

Construction Cost, Additional Space	\$2,971,000
-------------------------------------	-------------

Total Building Cost, Additional Space	\$3,328,000
---------------------------------------	-------------

Additional Offsetting Credits:

Sale of Vacated Properties	\$545,000
----------------------------	-----------

Annual Savings, Operations and Maintenance	\$10,770
--	----------

Condition and Efficiency of Present Space

The space presently occupied by the executive departments of the city's government is scattered, inefficient and largely obsolete. The City Hall itself is a very old and inefficient building, having been built during 1863-1865. The City Hall Annex is poorly arranged. To be made efficient it would require complete modernization and renovation. The condition of the remaining 30% of the space considered in this study varies from good to very poor. Much of it is makeshift in that it is being used for purposes other than those for which it was originally designed.

Feasibility and Cost of Rehabilitation

The construction, arrangement and general deterioration of the City Hall are such that rehabilitation of this building seems out of the question. A team of three appraisers has estimated that the City Hall Annex might be modernized at a cost of about \$1,000,000, or approximately \$10 per square foot of net usable space. This, however, would not solve the problem of providing efficiently arranged space for the remaining 50% of the city's executive agencies that could not be housed in the renovated City Hall Annex.

From the standpoint of cost alone, it seems impractical to renovate the balance of the city-owned space now occupied by the agencies that have been recommended for centralization. Even if renovation were feasible, it would only serve to perpetuate indefinitely the inefficiency and public inconvenience inherent in the city's present space situation. Beyond this, of course, is the fact that a new City Hall is considered essential to the proposed Government Center Project.

Space Occupancy and Requirements

Our inquiry has been limited primarily to the services and functions which the judgments of city officials and our own analyses have identified clearly as requiring central location. These include the departments presently housed in City Hall and the Annex, the Law Department, the Health Division and the Veterans' Services Department.

Our basic space and cost program has been developed to meet the space requirements of these agencies. Because policy questions beyond the scope of this study are involved, we have developed two alternative additions to the basic program.

Alternative A includes space in the proposed new building for the Boston Licensing Board, Boston Housing Authority, Boston Redevelopment Authority, and only the executive staffs of the Fire Department and Boston Traffic Commission.

Alternative B provides a separate but attached wing for the School Committee and the School Buildings Department, exclusive of their supply and storage requirements.

We estimate that the agencies included in the basic program are presently occupying approximately 188,790 net square feet of office space and will require approximately 196,730 net square feet of office

space in the new City Hall. The increase of about 4 percent over the office space presently occupied is required primarily for additional hearing rooms and record storage.

The total estimated area of the new building required to house the agencies included in the basic program was computed as follows:

<u>Type of Area</u>	<u>Square Feet</u>
Net Office Space	196,730
Additional Gross Area - 40 Percent of Net Office Space	<u>79,000</u>
Gross Area Aboveground	275,730
Dead Storage	40,000
Space for 100 City-Owned Cars	30,000
Service, Receiving and Mechanical	<u>23,000</u>
Total Basement Area	<u>93,000</u>
Total Building Area	<u><u>368,730</u></u>

If the size of the proposed new City Hall is increased to meet the estimated net office-space requirements of the functions included in the two alternative additions to the basic program, the additional space required would be approximately as follows:

	<u>Increase in Net Office Space</u>	<u>Increase in Total Building Area</u>
	(sq ft)	
Alternative A	27,500	39,700
Alternative B	<u>71,800</u>	<u>100,500</u>
Total	<u><u>99,300</u></u>	<u><u>140,200</u></u>

Building Specifications and Estimated Building Cost

In developing our cost estimates we have visualized a modern, efficient and functional building of pleasing but simple design. The specifications include a structural steel frame, durable, hard-surfaced curtain walls, plastic-asbestos-tile floor covering, automatic elevators, movable metal partitions, and air conditioning.

The estimated cost of a new City Hall to house the agencies included in the basic program and the two alternative additions may be summarized as follows:

Basic Program

Construction Cost	\$10,900,000	
Fees, Furnishings, etc.	<u>1,427,000</u>	
Total Building Cost		\$12,327,000

Alternative A

Construction Cost	\$ 1,174,000	
Fees, Furnishings, etc.	<u>141,000</u>	
Total Building Cost		1,315,000
Subtotal		\$13,642,000

Alternative B

Construction Cost	\$2,971,000	
Fees, Furnishings, etc.	<u>357,000</u>	
Total Building Cost		<u>3,328,000</u>
TOTAL		\$16,970,000

Offsetting Credits

Centralization of Boston's executive departments in a new City Hall may provide certain credits to offset, in part, the cost of the new building. The estimated credits from the sale of vacated properties, savings in operating and maintenance costs and discontinued rentals are summarized below:

<u>Credits</u>	<u>Basic Program</u>	<u>Alter- native A</u>	<u>Alter- native B</u>	<u>Total</u>
Sale of Vacated Properties	\$1,650,000	--	\$545,000	\$2,195,000
Annual Savings, Operations and Maintenance	29,961	--	10,770	40,731
Discontinued Rentals, Annual	50,440	53,225	--	103,665

Further details of these estimated credits are discussed and tabulated in Part V of this report.

II. BACKGROUND CONSIDERATIONS

The primary focus of this study is upon the types and amounts of space required for efficient operation of Boston's municipal government, and the approximate cost of providing this space at a new central location. In addition, and in order to give some perspective to the proposed City Hall project and to the methods and criteria used to estimate space requirements and construction specifications, we have given brief attention to certain background considerations. These include (1) the general physical condition and efficiency of the space currently in use, (2) the feasibility and approximate cost of rehabilitating this space and (3) the relationship of the proposed City Hall to the Government Center Project.

A. GENERAL CONDITION AND EFFICIENCY OF PRESENT SPACE

The space used to conduct a city's municipal affairs has a profound effect upon the manner in which these affairs are performed, and the efficiency or cost of the city's governmental operations.

The amount of space should be adequate for efficient groupings and work flows and should permit needed expansion; the location should afford convenient public access. The appearance and general condition of the space should be a continuing source of pride to citizens and employees; and the internal arrangement should promote efficient communication and management among the various departments and activities.

Most of the space now occupied by the executive departments of the Boston City Government fails to meet these standards. The City Hall itself is obsolete and inefficient; it was built nearly 100 years ago. The City Hall Annex, although basically a sound building, has poor internal arrangement and is badly in need of complete modernization and renovation. These two structures account for about 70 percent of the total space currently occupied by the city's executive departments. The balance of the space is located in scattered city-owned and rented quarters, ranging in condition from good to exceedingly poor. A large percentage of this space is makeshift in the sense that it was constructed for purposes other than those for which it is now being used.

Even the most casual inspection of City Hall and the Annex reveals the low efficiency and general deterioration of Boston's principal seat of municipal government. More systematic examination has produced several specific examples:

- a. The upper three floors of the City Hall have been condemned because of structural weaknesses and the lack of suitable fire exits. The fifth floor, which is fully occupied, is also well below minimum fire-protection standards.
- b. In a report to the Governor, the Mayor and to the General Court (appearing in House 2224 dated January 1950), the Finance Commission stated as follows: "Space allotments for the various offices concerned with financial administration are unbalanced, and physical separation of organization units interferes with coordination and efficiency. Offices are poorly lighted, uncomfortably hot in summer, and noisy. Private office space is not provided for responsible administrative officers. Aside from minor adjustments which should be made in space allocations, the plight of the financial offices in connection with office facilities is common to all agencies in the City Hall and will only be relieved when the city can provide new working quarters. "
- c. The Collecting Division of the Treasury Department is divided between City Hall and the City Hall Annex. Its records are stored in numerous widely separated areas ranging from the eleventh floor of the Annex to the basement vaults of City Hall.
- d. The bookkeeping and machine tabulating unit of the Auditing Department is not on the same floor as the Auditor and the balance of his staff. The payroll unit is similarly removed and presents a serious management problem for the Treasurer who is responsible jointly with the Auditor for payroll preparation.
- e. The flow of work is seriously interrupted because the Tabulating Section of the Assessing Department, on the eighth floor of City Hall Annex, is separated by five floors from the remainder of the Department. If space permitted, the cost of machine computing and tabulating could probably be substantially reduced.

Both the Assessing and Treasury Departments operate separate machine units, even though the peak work load in the Assessing Department is followed by the peak load in Treasury. In both Departments the space available for machine operations is very inadequate.

- f. The various licenses and permits issued by the city are processed at many scattered points. The centralization of this function would greatly improve efficiency and substantially reduce the volume of public traffic throughout the two buildings.
- g. Facilities for storing city records, both active and inactive, are grossly inadequate. Important and frequently used records are stored in antiquated vaults, out-of-the-way rooms, hallways, and various underground spaces. Large quantities of valuable historical records are stored in the basement and subbasement of the City Hall. Many of these records are deteriorating from dampness and general neglect.
- h. In both buildings the lighting, ventilation and sanitary facilities are well below minimum standards.
- i. The center stairway construction of the City Hall, coupled with the elevator space and the rectangular hallways on each floor constitutes a basic fire hazard and reduces the net usable aboveground space in this building to about 66% of the gross space. This may be compared with a ratio of approximately 70-75% in modern buildings.

These examples serve primarily to underscore the disparity between what is needed and what is available to Boston for its governmental operations. This need relates not only to the efficiency with which the city's vital public services are provided, but also to the importance of the City Hall as a symbol of growth and progress.

B. FEASIBILITY AND COST OF REHABILITATING PRESENT SPACE

Three city-owned properties will be vacated if the agencies included in the basic program are housed in a new City Hall. These properties are:

<u>Property</u>	<u>Office Space</u>
City Hall	49,358 sq ft
City Hall Annex	101,458 sq ft
Haymarket Square Building	<u>16,050 sq ft</u>
Total	166,866 sq ft

These three structures contain about 88% of the net usable space presently occupied by the agencies included in the basic program, or about 85% of the estimated total net space required to house them efficiently in a new building.

Occupancy of the Haymarket Square property by the Health Division of the Health Department at best is a makeshift use of a space designed for other purposes. Therefore, the question of whether Boston's City Hall problem can be solved by rehabilitating the space presently occupied, depends mainly upon whether rehabilitation of both City Hall and the Annex is, in fact, a practical alternative to construction of a new building. The answer clearly appears to be "no" when both buildings are considered as a single facility, although the situation is markedly different for each of the two structures.

The feasibility and approximate cost of rehabilitating these city-owned properties was studied by a team of consulting appraisers.¹ The report of this group is contained in Appendix A. Their conclusions regarding City Hall and the Annex were as follows:

-
1. Mr. Joseph C. Skinner, Walter Channing, Inc., Boston
Mr. Arthur Wilcox, A. W. Perry, Inc., Boston
Mr. Thomas M. Horan, Meredith and Grew, Inc., Boston

City Hall

"The existing building is functionally outmoded and in marked violation of many elements of present building codes, including basic safety factors. From an operating point of view, the building is highly inefficient. Any estimate of the amount of deferred maintenance or of probable cost to renovate to modern standards would be valueless. In the opinion of the appraising team, the building has no value and should be demolished. "

City Hall Annex

"The building is easily adaptable for office use and readily marketable if for sale. The dimensions of the building and location of the principal services and facilities, particularly the modernized elevators, make feasible efficient and potentially attractive office arrangements with maximum natural daylight and minimum waste space. In spite of considerable obsolescence and deferred maintenance, the potential of the building is well demonstrated by recently completed modernization of the Building Department quarters on the ninth floor.

It is our opinion that the modernization of the entire building could be completed, including new flooring, lighting, acoustical ceilings, toilets, wiring, heating, and air conditioning for an estimated one million dollars. "

From the appraisers' report it seems clear that rehabilitation of City Hall is impractical. Although modernization of the City Hall Annex may be feasible, the city would still lack a minimum of approximately 100,000 square feet of efficient centralized office space.

C. THE RELATIONSHIP OF THE NEW CITY HALL TO THE GOVERNMENT CENTER PROJECT

The proposed Government Center Project provides a unique opportunity for the City of Boston to overcome the inadequacies and inefficiencies of its present executive facilities and at the same time to gain the benefits from bringing closely related functions into a central location.

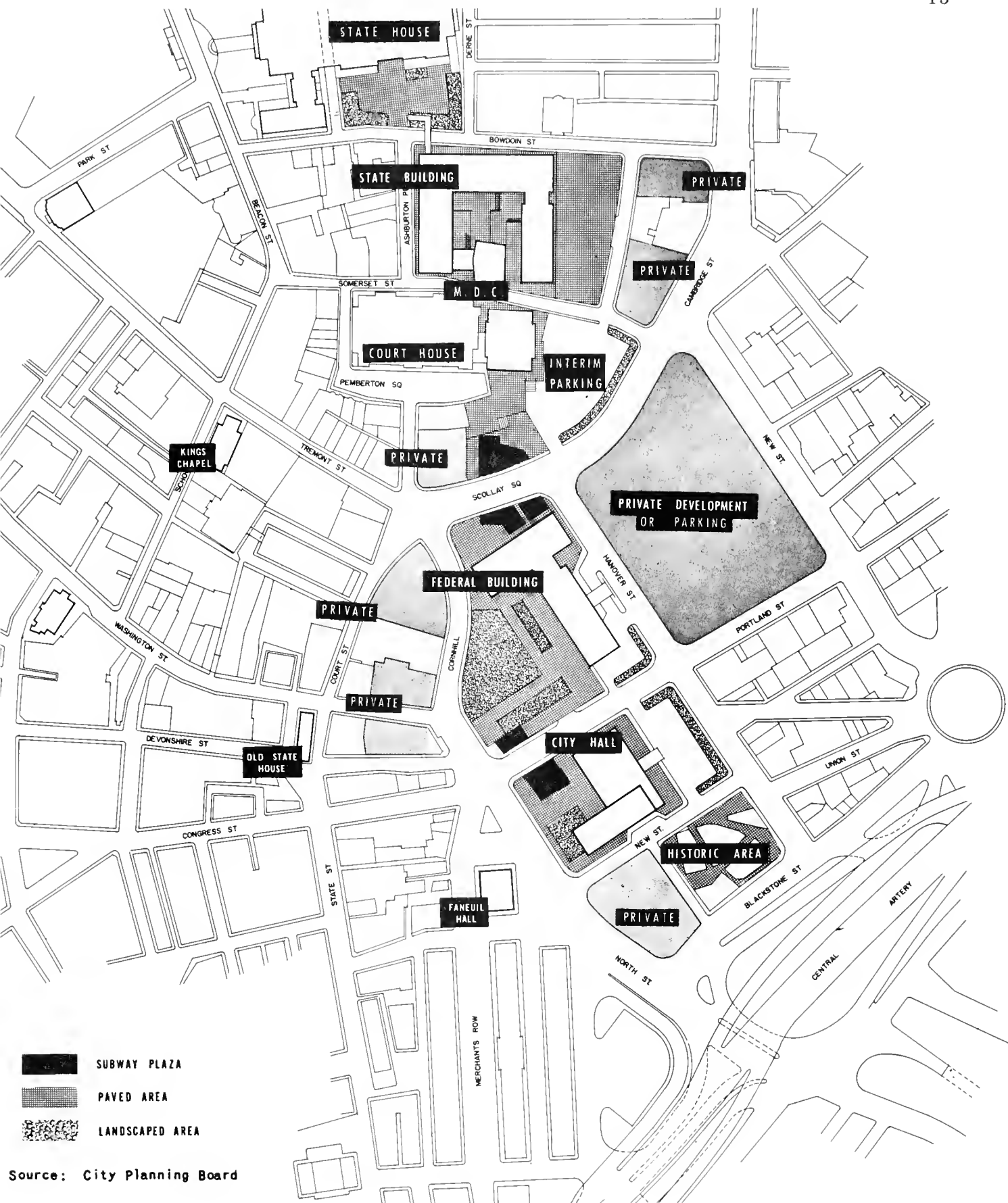
This Project, as presently planned by the Boston City Planning Board¹ visualizes complete redevelopment of about 32 acres, immediately north of the downtown retail and office district and centered approximately at Scollay Square. A preliminary land-use plan for the Project is shown in Figure 1. In its preliminary report the Planning Board described this area as follows:²

"Present structures are, with few exceptions, ancient and ill-adapted to current uses. Deterioration and neglect are characteristic. The vacancy ratio is the highest in the entire business district. In addition, the area is encumbered with a hopeless confusion of streets which alone occupy nearly one half of the total area. "

A federal office building, a state office building, a new City Hall and possibly a new or additional county building would be erected within the redeveloped area, forming the core of the Project. Construction of the federal, state and city buildings would provide immediate utilization of about half of the area. The balance would be made available for private use. The existing excellent transit and automobile access to the area, the purchasing power of public workers and visitors, and the convenience and attractiveness of the Center should combine to attract private investment in retail trade, office facilities, off-street parking and other central city economic functions. Although some land would be removed from the tax rolls, it is expected that this would be much more than offset by a substantial increase in physical plant and a marked improvement in the tax base.

1. Boston City Planning Board: "Government Center Study, A Preliminary Report, " August 1956; and "Government Center Project, " January 1958.

2. Op. Cit., p. 2.



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SCALE 1" = 100 FEET

Beyond this it is believed that the value of blighted properties adjoining the Center would increase to the point where it would pay to modernize or redevelop them. In this way the Government Center Project is expected to start a redevelopment movement that will spread outward from the Center and provide the city with increasingly better central business facilities and an improved tax base; and thus contribute substantially to the city's adjustment to the role of the central core of a large metropolitan area.

The federal office building would be the largest of the three proposed buildings; it would house approximately half of the public workers in the area. The participation of the Federal Government is therefore clearly essential to the Project.

Federal activities in the Boston area are widely scattered and are housed largely in rented quarters. The General Services Administration has been interested for some time in construction of a centrally located federal office building. This agency is reported to favor erection of a building in the Government Center provided (a) both the State of Massachusetts and the City of Boston are willing to carry out their parts of the Government Center plan, and (b) the land for the federal building can be acquired at reasonable cost. In these terms it seems clear that construction of a new City Hall is essential to the Government Center Project.

The Project is broadly supported by Boston business, labor and civic organizations, and by local and state governmental officials. The Boston City Council has approved and Major Hynes has submitted to the General Court a bill to (a) authorize the city to borrow up to 50 million dollars to build a new City Hall and (b) construct and sell an office building to the Federal Government under a lease-purchase arrangement.

III. SPACE OCCUPANCY AND REQUIREMENTS

A. SELECTION OF DEPARTMENTS AND ACTIVITIES FOR CENTRAL LOCATION

When Boston's present City Hall was completed (during 1863-1865) it was designed to provide about 50,000 square feet of net usable space.¹ As the city grew its requirements for governmental services also increased, and by the early 1900's a large part of the city's business was conducted from widely scattered locations.

In 1914 construction of the City Hall Annex added approximately 100,000 square feet of net space to the central government establishment. Since then further growth has again produced considerable physical dispersion of the city's governmental structure. At present, the departments and other units of the city government which, in this study, have been reviewed with respect to their need for central location, occupy space in some 23 separate locations. These departments and activities and their present locations are shown in Table I.

The Importance of Careful Selection

When lack of central space has caused a city's governmental units to become scattered, there can be little question that in planning a new city hall one of the most important decisions is selection of the departments and activities to be housed in the building. This decision, and its translation into the types and amounts of space needed, will not only be the dominant factor in the cost of construction, but it will also have a very significant and lasting effect upon the nature and efficiency of the city's governmental operations. Consequently, this decision should be made only after very careful study.

When it has been determined that a new Boston City Hall is to be constructed, a detailed study should be made of the responsibilities and public service functions of each agency. With this information at hand, the essential operating interrelationships and logical work flows for these agencies can be determined and a decision reached in each case regarding the need for a centralized location.

-
1. Gross space refers to the total inside space of an area or building. Net space excludes from the gross calculation the space used for halls, stairways, elevators, ducts, building machinery, etc.

TABLE I

PRESENT LOCATION OF BOSTON CITY DEPARTMENTS
AND ACTIVITIES CONSIDERED FOR OCCUPANCY OF
A NEW CITY HALL

<u>Building or Location</u>	<u>Departments and Activities</u>
-----------------------------	-----------------------------------

CITY-OWNED PROPERTY

City Hall	City Council Major's Office City Clerk Department Licensing Division Administrative Services Department Boston Retirement Board City Record Treasury Department - Collecting Division (excluding Water)
City Hall Annex	Assessing Department Auditing Department Building Department Election Department Health Department - Registry Division Weights and Measures Division Law Department - Workmen's Compensation Penal Institutions Department Public Works Department Real Property Department - Property Division Buildings Division Treasury Department - Treasury Division Collecting Division (Water) City Planning Department
Haymarket Square	Health Department - Health Division
33 Beacon Street	Parks and Recreation Department - Administration

TABLE I (Continued)

<u>Building or Location</u>	<u>Departments and Activities</u>
-----------------------------	-----------------------------------

CITY-OWNED PROPERTY

15 Beacon Street	School Committee
45 Myrtle Street	School Committee (annex)
440 Brookline Avenue	School Committee (supply)
26-28 Norman Street	School Buildings Department
West Newton Street	School Buildings Department (storage)
Quincy Market	Real Property Department - Market Division
43 Hawkins Street	Welfare Department
174 North Street	Administrative Services Department - Printing Division
115 Southampton Street	Fire Department - Executive Headquarters
	Civil Defense
112 Southampton Street	Boston Traffic Commission - Executive Staff
818 Harrison Avenue	Hospital Department
154 Berkeley Street	Police Department - Headquarters

RENTED SPACE

11 Beacon Street	Law Department (except Workmen's Compensation)
18 Cornhill	Veterans' Services Department
14 State Street	Graves Registration
73 Tremont Street	Boston Redevelopment Authority
230 Congress Street	Boston Housing Authority
24 School Street	Boston Finance Commission
24 Province Street	Boston Licensing Board

Method of Selection

The scope of this preliminary study does not provide for a detailed survey of functions and relationships. Therefore we have relied primarily upon the judgment of city officials and other experienced civic leaders in selecting the departments and agencies that should be logically housed in a new City Hall. Where judgments vary, we have based our selection upon necessarily brief examinations of the agencies in question. The result, we believe, is a fairly conservative estimate of the departments and activities requiring a central location.

This, in turn, is somewhat offset by the fact that selection has been made mainly by departments rather than by divisions or other administrative units within departments. Had a more intensive survey been called for, it might have been found that some divisions or parts of divisions could perform their functions more efficiently from field headquarters.

Finally, it should be added that the scope of this study has not required any examination of the administrative efficiency of the city government. Therefore we have necessarily based our estimates upon present staffing patterns.

Classification of Agencies

Based on the method and considerations mentioned above, the departments and other administrative units of the Boston city government were initially classified into three "central location" categories, as follows:

- I. Central Location Recommended
- II. Central Location Recommended if Efficient
- III. Central Location not Recommended

The classification of each agency into one of these categories represented initial judgment regarding the relative need or desirability of locating the activity in the new City Hall. The results of this analysis are shown in Appendix B.

Following the initial classification, the agencies in Category II were examined briefly from the standpoint of their functions, their relationships with other agencies and the public, and the character and cost

of the space now occupied. These agencies were then reclassified into either Category I (Recommended) or Category III (not Recommended).

The agencies in Category I form the core executive group of the city government and perform the functions included in the basic space and cost program discussed in the balance of this study. These agencies are as follows:

Agencies Included in Basic Program

City Council	Law Department
Mayor's Office	Penal Institutions Department
City Clerk Department	Public Works Department
Licensing Division	Real Property Department
Administrative Services	(exclusive of Market Division)
Department (exclusive	Treasury Department
of Printing Division)	Veterans' Services Department
Assessing Department	Boston Retirement Board
Auditing Department	City Planning Department
Building Department	City Record
Election Department	
Health Department	
Health Division	
Registry Division	
Weights & Measures Division	

The space required and the approximate cost of adding two alternative groups of agencies to the basic program are also discussed briefly. These alternative additions include the following agencies:

Alternative A

Fire Department, executive
staff only
Boston Traffic Commission,
executive staff only
Boston Licensing Board
Boston Redevelopment Authority
Boston Housing Authority

Alternative B

School Committee
School Buildings Department

With respect to the Boston Traffic Commission and the Fire Department, it has been suggested, and with reason, that their executive staffs (about 70 persons) should be housed in City Hall. On the other hand, it may be argued that these departments should be administered

near the center of their respective activities. Because this is essentially a matter of city policy, we have not attempted to resolve it. Instead, we have considered the space required for centralization of these administrative functions as an alternative addition to our basic space and cost estimates. For similar reasons, the Boston Licensing Board, Boston Redevelopment Authority and Boston Housing Authority have been classified as alternative additions.

The question of whether the executive and administrative functions of the Boston School System (i. e., the School Committee and the School Buildings Department, exclusive of their supply and storage functions) should be housed in the proposed new City Hall has been treated in similar fashion. Because the members of the School Committee and the Board of Commissioners of School Buildings are elected, and otherwise have important responsibilities to the State, there is some belief that the school functions should have a certain degree of physical separation from the city's regular executive departments. Two alternative means of achieving this have been suggested:

- (1) House these activities in a connected but separate wing of the new City Hall, or
- (2) Provide space for them in the vacated City Hall Annex.

The estimated additional space required and the approximate cost of a connecting wing to the new building are shown in the following sections. We have not considered the feasibility or cost of housing the school functions in the City Hall Annex.

B. SPACE REQUIREMENTS

Having selected the agencies for the basic building program, the next step in estimating the cost of the new City Hall was to estimate the amount of space required by each department.

In making this estimate we have surveyed the space needs of each agency from three different aspects:

- a. The amounts and types of space presently occupied.
- b. Departmental estimates of space requirements.
- c. The application of selected standard space requirements to the types of office personnel to be housed.

Our final estimates of the departments' space requirements are based on the findings from all three analyses. Generally, it was found that the standard space allowances were more useful in estimating the working space required for the various types of city employees. The space presently occupied and departmental estimates of future requirements were of greater value in estimating the space required for purposes such as hearings, conferences, public services and storage.

Survey of Space Presently Occupied

The departments selected for centralization under the basic program are now located in six separate buildings. The total amount of office-type space occupied by each was determined from blueprints or lease agreements and from inspection of the space itself. Within the departments, the amounts now in use for special purposes -- such as conference and hearing rooms, public access and equipment and storage-- were determined from the blueprints, inspection and measurement, and the estimates of department officials.

The adequacy of the presently occupied space varies greatly from one department to another. Inspection indicated that, purely from the standpoint of space arrangement, some departments were extremely crowded, while others have more than enough room. Storage space was generally inadequate and inefficiencies of space utilization resulting from poor space arrangement are numerous.

The space occupied by each department is shown in Table II. These figures include the space used by each department to serve the public as well as conference rooms and other types of special purpose space. Dead storage for all departments appears as a single figure.

Departmental Estimates of Space Requirements

Shortly before this study was undertaken the Administrative Services Department requested each agency of the city government to estimate the amount of space it would need in a new City Hall. These estimates, together with our interviews with department heads and

TABLE II

SPACE NOW OCCUPIED BY THE DEPARTMENTS
TO BE INCLUDED IN THE NEW CITY HALL

<u>Departmental Space</u>	<u>Sq Ft</u>
Administrative Services Department	6,025
Assessing Department	12,100
Auditing Department	9,800
Boston Retirement Board	4,500
Building Department	13,900
City Clerk Department	3,600
City Council	12,600
City Planning Board	4,900
City Record	400
Election Department	7,200
Health Department	23,600
Law Department	11,350
Mayor's Office	6,400
Penal Institutions Department	2,200
Public Works Department -	37,657
Real Property Department	5,500
Treasury Department	14,550
Veterans' Services Department	10,925
Press Room and White Fund Room	<u>1,584</u>
Total Net Office Space	188,791
Dead Storage Space	<u>20,000</u>
Total Net Space	<u><u>208,791</u></u>

measurement and inspection of space presently occupied, were especially useful in arriving at our final estimates of the space required for special purposes such as hearings, conferences, public access and record storage.

The agencies included in the basic program estimated their total requirements at approximately 242,000 square feet of net office space. This compares to our final estimate of 196,730 square feet to accommodate the same functions. The difference is explained in part by elimination in the final estimate of duplication in certain types of space used by more than one department, and in part by the greater efficiency of modern functional space.

Selection and Application of Standard Space Allowances

In developing a method for estimating space requirements we concluded that in addition to measurement of space utilized and departmental estimates of future requirements, it would be very useful to have standard space allowances for the different types of municipal employees.

The term "standard space allowance" refers to the amount of net space (in square feet) allowed for each functional type of employee. For example, a clerk or typist may require 75 square feet of space for a desk, a chair, and for storage and access. In space planning this basic "building block" is multiplied by the number of typists to estimate the total net space required to house this function.

A number of such standard allowances have been developed through practical experience and the research efforts of governmental agencies, trade associations and office equipment manufacturers. Although the allowances for various functions as developed by the different organizations vary considerably, they nevertheless are very useful in comparing the space utilization of various buildings, and in estimating the space requirements for a new building.

It should be emphasized, however, that the space allowance approach is not a complete substitute for judgment. Because these allowances are applicable primarily to space occupied by personnel, considerable judgment is required to estimate the space allowances for non-personnel functions. Non-personnel space is particularly important in planning a city hall, for a large part of the total space must be devoted to public access, record storage, hearing rooms, and similar uses.

After surveying the space allocation allowances currently in use, five classes of office space were established: personnel space, public access space, hearing and conference space, equipment and live

storage space, and dead storage space. The first of these, personnel space, was then divided further into six subcategories to match the functional categories of office personnel. These subcategories distinguish between the space needs of personnel according to grade and type of work performed. The six subcategories of personnel space are: executive private office, administrative private office, supervisory, technical, clerical, and field service.

In developing the particular space allowances used in this study we first surveyed the allowances recommended by the various planning organizations, and actual space usage in several modern public and private office buildings. The results of this survey are shown graphically in Figure 2.

It will be noted that with the exception of private office space the allowance standards shown in Figure 2 are within a reasonably close range. The variations in allowances for private offices reflect the wide range of functions and space needs of executive and administrative personnel.

The space allowance standards used in estimating the different types of space required in the new Boston City Hall were as follows:

<u>Functional Category</u>	<u>Space Allowance</u> (sq ft)
<u>Private Offices</u>	
Executive	400
Administrative	200
<u>Open Space</u>	
Supervisory	100
Technical-Engineering	90
Clerical	75
Field Service	50

The allowances for private office space were selected after examination and, in some cases, measurement of existing offices, plus interviews with the heads of the major departments. Allowances for the remaining functional categories were established at about the mean of the several alternatives.

It is important to emphasize that the standard space allowances used in this study are averages and therefore do not necessarily represent the space requirements of any single individual.

After establishing standard space allowances, the existing personnel quotas of the agencies included in our basic program were classified into the six functional space categories. This classification is shown in Table III.

The total net office space required for each of the space categories was then computed, as follows:

<u>Space Category</u>	<u>Standard Space Allocation</u> (sq ft)	<u>Number of Personnel</u>	<u>Estimated Net Personnel Space Required</u> (sq ft)
Executive Office	400	23	9,200
Administrative Office	200	61	12,200
Supervisory	100	106	10,600
Technical	90	127	11,430
Clerical	75	775	58,125
Field Service	50	<u>157</u>	<u>7,850</u>
Total		<u>1,249</u>	<u>109,405</u>

It should be noted that the estimate of total net personnel space makes no allowance for future increase in the number of personnel employed by the agencies included in the basic program. This assumption is in accord with current city policy and is also supported by the relatively stable level of Boston's municipal employment over recent years, as shown in Table IV. It is recognized, however, that future circumstances may require an increase in Boston's public services. Furthermore, the space requirements of the individual departments are quite likely to change, even though over-all employment remains fairly stable.

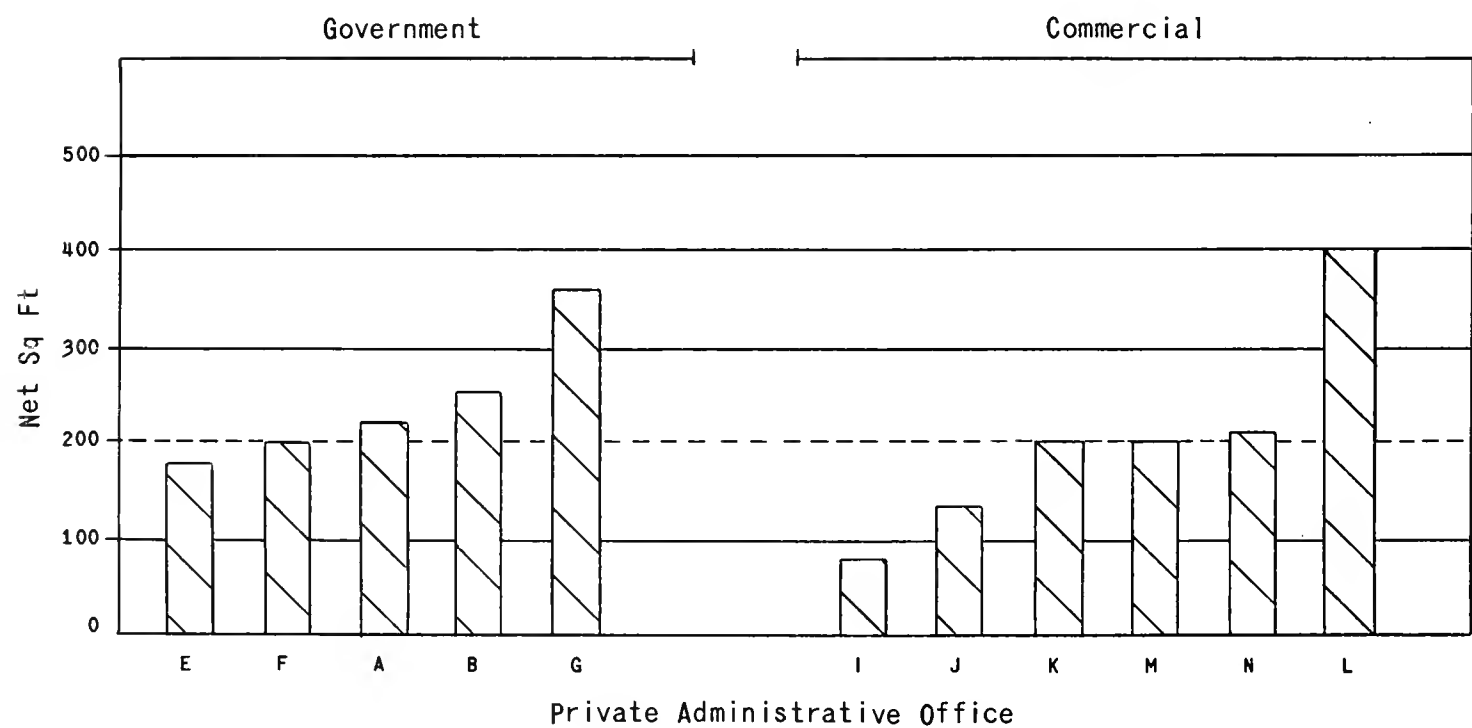
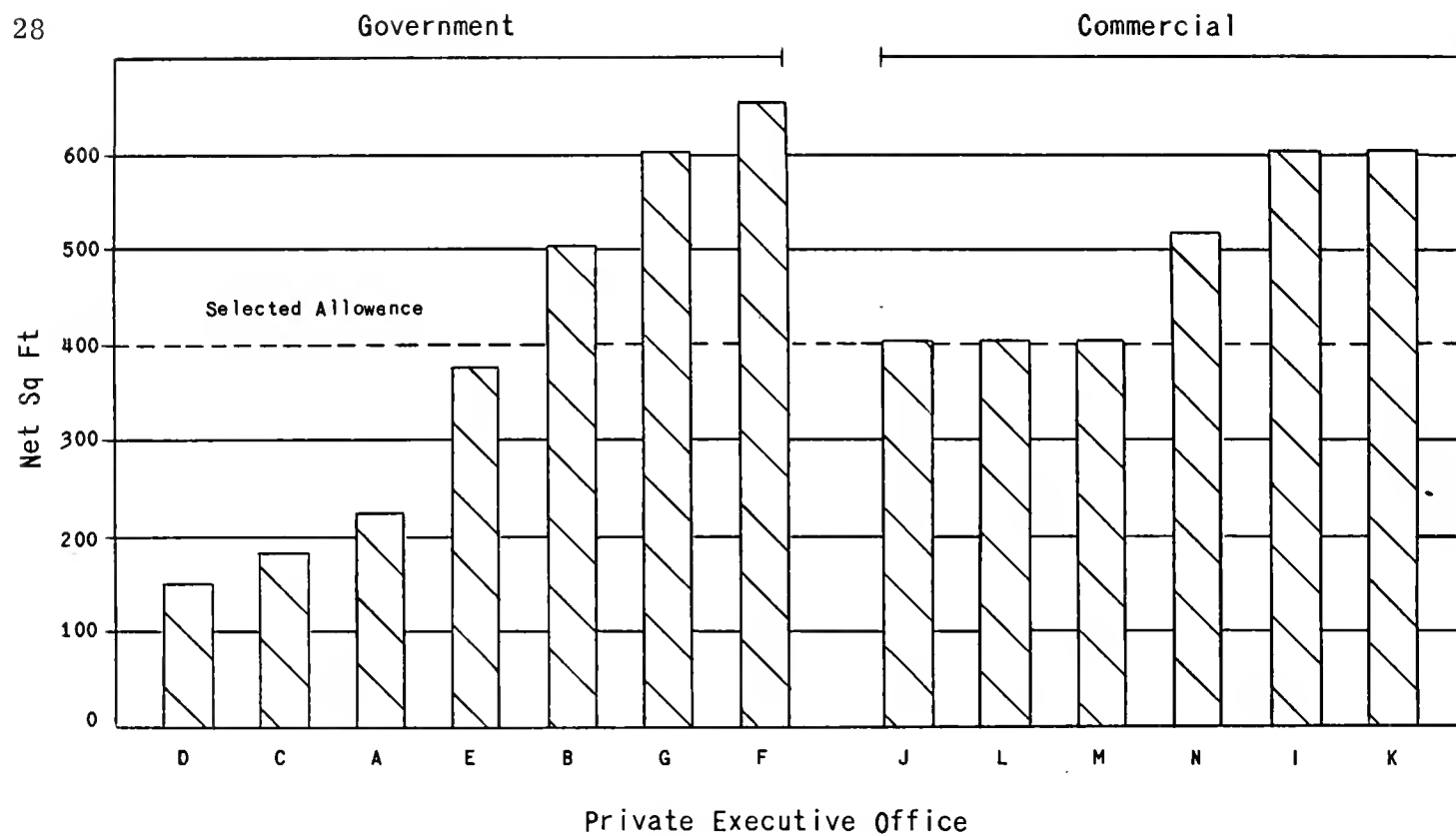
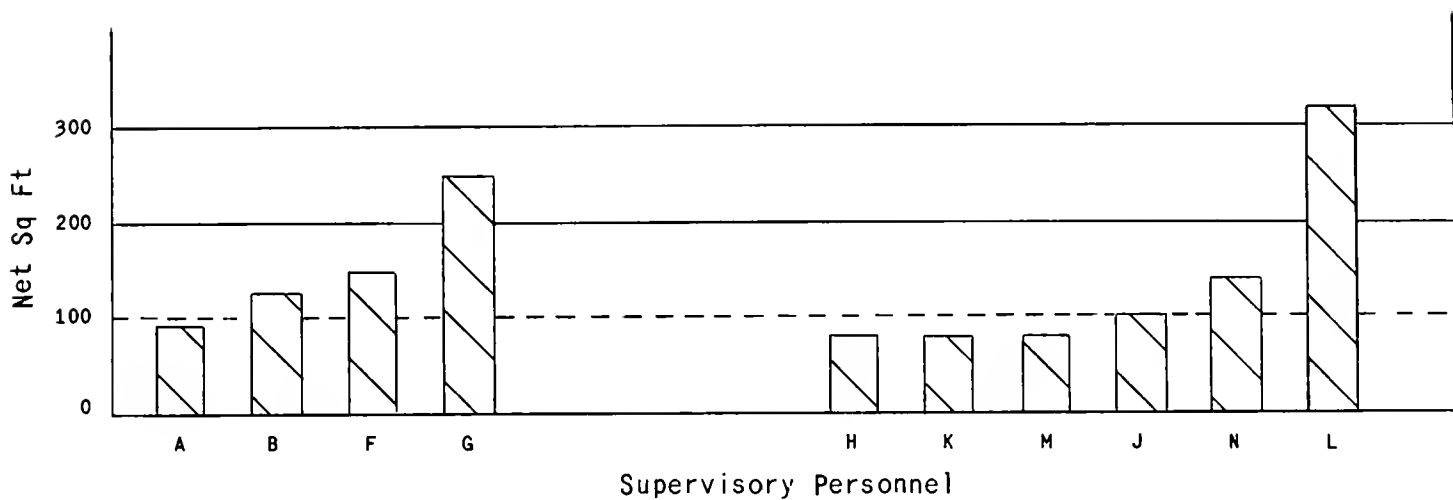


Figure 2
ALTERNATIVE SPACE ALLOWANCES¹ FOR STANDARD OFFICE FUNCTIONS

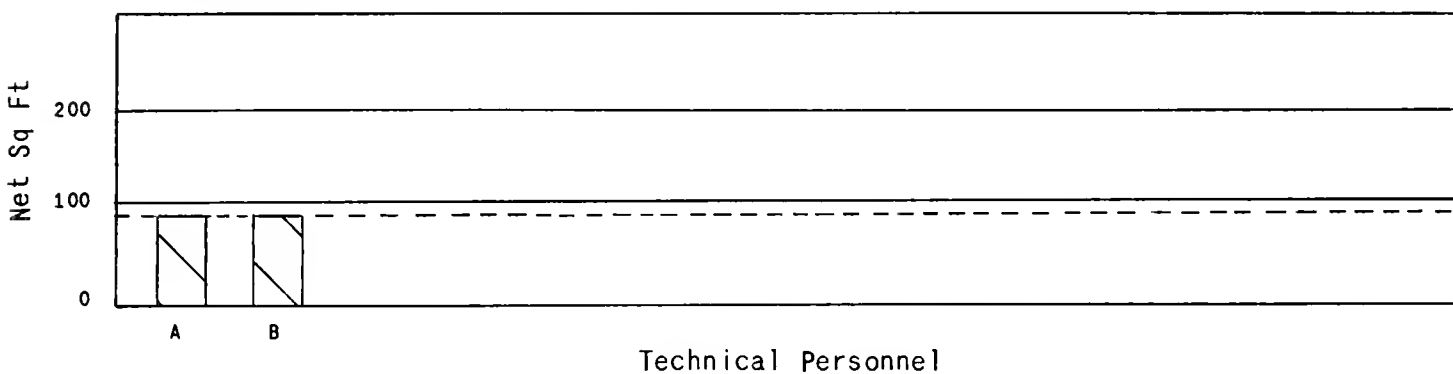
¹See Appendix C for Sources of Alternative Space Allowances.

Government

Commercial

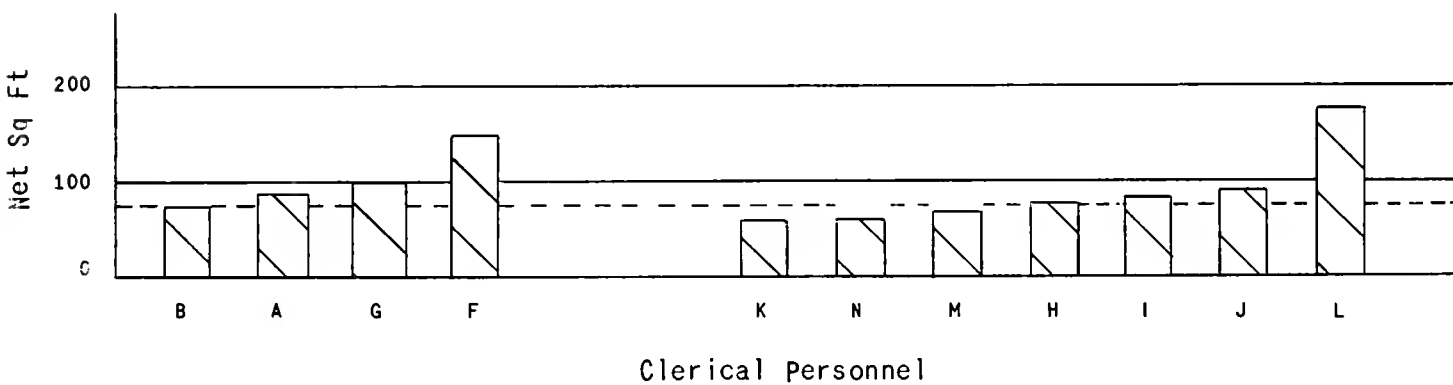


Government



Government

Commercial



Government

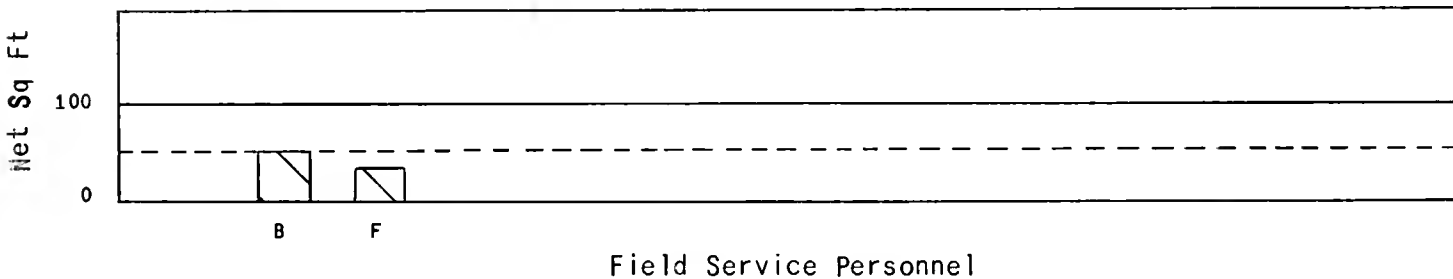


Figure 2 (Continued)

TABLE III

CLASSIFICATION OF BOSTON MUNICIPAL PERSONNEL
BY FUNCTIONAL SPACE CATEGORIES

<u>Department</u>	<u>Execu- tive Office</u>	<u>Adminis- trative Office</u>	<u>Super- visory</u>	<u>Clerical</u>	<u>Technical</u>	<u>Field</u>	<u>Total</u>
Administrative Services Department	1	6	11	44			62
Assessing Department	4	8	8	73	3	51	147
Auditing Department	1	2	2	69			74
Boston Retirement Board	1			24			25
Building Department	1	5	17	18	27	90	158
City Clerk Department	1		2	13	1		17
City Planning Department	1	2	2	5	21		31
City Record		2					2
Election Department	4		2	43			49
Health Department	1	14	4	83	11		113
Law Department	1	10	25	36		7	79
Penal Institutions Department	1	1	3	8		3	16
Public Works Department	1	7	15	157	60	4	244
Real Property Department	2		4	15	3	2	26
Treasury Department	2	3	6	111			122
Veterans' Service Department	1	1	5	76	1		84
Total	23	61	106	775	127	157	1,249

TABLE IV

CITY OF BOSTON
TOTAL PAID EMPLOYEES
1949-1957

<u>Year</u>	<u>Officials and Employees</u>
1949	21,848
1950	22,011
1951	21,683
1952	22,385
1953	21,863
1954	21,632
1955	21,554
1956	21,757
1957	21,488

Source: City Records.

We have provided for these contingencies in a general way by assuming a building designed for maximum internal flexibility of use, and which may also be expanded if necessary.

To determine the balance of the net office space required under the basic program, it was necessary to develop estimates of space for various special purposes such as City Council meetings, public hearings, conferences, public access to departmental services and storage of active records and office equipment. These estimates represent judgments based upon inspection and blueprint measurement of the space presently used for these purposes, interviews with department officials and estimates of average and peak loads.

With the exception of active record storage, the space allowances in the new building for most of these purposes are not significantly larger than the space presently available. The allowance for storing active records has been increased by about 50 percent in order to correct the inadequacy of present facilities and to provide space for future requirements. In this connection, and also with respect to inactive records, considerable savings in space and cost could be made if it were possible to utilize microfilm techniques to greater advantage. We suggest that the possibilities be investigated thoroughly before a firm building program is adopted.

Taking into account the office-type space required for both personnel and special purposes, it is estimated that 196,730 net square feet will be required in the new City Hall to house the agencies included in the basic program. A summary of this estimate by types of space is shown in Table V.

After estimating net office space, the total gross space or building area required to house the agencies included in the basic program was estimated, as shown in Table VI.

TABLE V

ESTIMATED NET OFFICE SPACE REQUIREMENTS
NEW BOSTON CITY HALL

<u>Types of Space</u>	<u>Estimated Space</u> (net sq ft)
Space Allocated to Personnel	109,405
Special Purpose Space	
Mayor's Office and City Council	20,000
Public Service Space	7,500
Conference and Hearing Rooms	<u>6,300</u>
Subtotal	143,205
Other Special Purpose Space (Vaults, Laboratory, Teller, Cashier and Bond Cages, Press Room, etc.)	7,800
Subtotal	<u>151,005</u>
Office Equipment and Active Records	<u>45,725</u>
Total Net Office Space	<u><u>196,730</u></u>

TABLE VI

ESTIMATED TOTAL BUILDING AREA
NEW BOSTON CITY HALL

<u>Types of Space</u>	<u>Square Feet</u>
Net Office Space	196,730
Additional Gross Area - 40% of Net Office Space	<u>79,000</u>
Gross Area Aboveground	275,730
Dead Storage	40,000
Space for 100 City-Owned Cars	30,000
Service, Receiving and Mechanical	<u>23,000</u>
Total Basement Area	<u>93,000</u>
Total Building Area	<u><u>368,730</u></u>

The net and gross amounts of space required to house the agencies included in the alternative additions to the basic program have been estimated broadly as follows:

Alternative A

(Boston Licensing Board, Boston Redevelopment Authority, Boston Housing Authority, and Executive Staffs of Fire Department and Boston Traffic Commission)

Net Office Space	27,500 sq ft
Additional Gross Area - 40% of Net	<u>11,000 sq ft</u>
Gross Area Aboveground	38,500 sq ft
Dead Storage	<u>1,200 sq ft</u>
Total Additional Building Area	<u><u>39,700 sq ft</u></u>

Alternative B

(School Committee and School Buildings Department)

Net Office Space 71,800 sq ft

Additional Gross Area - 40% of Net 28,700 sq ft

Total Additional Building Area 100,500 sq ft

IV. ARCHITECTURAL-ENGINEERING SPECIFICATIONS¹

The basic factor in the cost of a new City Hall, namely the net building space required, has been estimated in Section III. Certain other cost factors, including the structural frame and plumbing, relate primarily to the over-all size of the building and are considered in Section V.

The remaining cost variables relate to:

- Permanence of building
- Quality of finish
- Quality of mechanical services
- Space flexibility
- Efficiency of building shape
- Site
- Expansion

A. PERMANENCE

Two concepts of a city hall are current today: one conceives it as an important, permanent public building with monumental qualities; the other sees it as a municipal office building with operating efficiency its foremost objective. We have assumed a building with the efficiency expected of modern offices, but with a character and permanence appropriate to the Government Center Project and Massachusetts' traditions.

B. QUALITY OF FINISH

Permanent high quality finish materials result in a greater initial cost, but, in addition to achieving a dignified character, they result in minimum maintenance and repair costs. We have assumed that the exterior will be of stone with bronze windows. Interior public spaces will be of marble and other durable materials. Office space will be finished with standard materials typical of private office buildings.

C. QUALITY OF MECHANICAL SERVICES

Complete air conditioning has become standard for modern offices and has been included in the cost estimate. It has been required

1. Estimated by Shepley, Bulfinch, Richardson and Abbott.

by popular demand and by the heat given off by electric business machines and high intensity modern lighting. Private business has found air conditioning helpful in attracting and holding qualified personnel and in preventing loss of efficiency and time due to hot weather.

Eight fully-automatic elevators similar to those recently installed in City Hall Annex have been included - plus one freight elevator.

Ample electric service has been included in view of the trend toward electronic computers and other time-saving business machines.

It is assumed that steam will be available from a street main and that no boiler plant will be required.

D. SPACE FLEXIBILITY

Although the total number of employees of the centralized offices has tended to remain stable along with the stability of Boston's population, occasional departmental reorganization requires flexibility of office layout. The cost of typical interior space has been based on standard movable metal partitions, a system of ceiling lights and air supply diffusers adaptable to different arrangements, and a system of built-in floor conduits for bringing electric service, telephone lines, etc., to any point on a floor.

Other aspects of flexibility such as window spacing, floor depth and corridor arrangement will depend on the final architectural design.

E. EFFICIENCY OF BUILDING SHAPE

Whether the City Hall should be a tall or a low building or a combination of the two will require a careful balance of many factors including characteristics of the building site. We have assumed a building consisting of two basements of 50,000 square feet each and 14 additional floors of 20,000 square feet each.

In general, a high building will cost more because of increased wall surface and number of elevators. High buildings are usually justified by high land cost or subsoil conditions requiring unusually deep foundations.

Low buildings tend to offer a larger proportion of usable office area and to require simpler construction.

In the matter of planning efficiency, we have analyzed several buildings to determine a reasonable ratio of net office area to gross building area. The results appear graphically in Figure 3. The percentages vary from 85% for a modern commercial property with a minimum of public space to 69% for the present City Hall and Annex. Considering the public nature of a new City Hall, we have selected 71% in arriving at the total size of the building.

Given a certain quality of building finish and equipment, normal variations in planning efficiency and building shape may account for a variation of 3% from the estimated cost.

F. SITE

Although no specific site has been investigated, it should be made clear that a small, irregular site or one with difficult subsoil conditions should be carefully analyzed for its effect on the efficiency of building shape.

A possible building economy involving the site would be the provision of surface parking for the 100 cars which have been assigned 30,000 square feet of basement space.

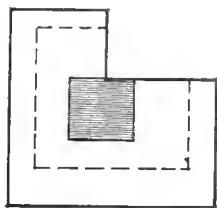
G. EXPANSION

No provision for expansion has been recommended. Individual departments may be expanded by moving the flexible partitions, but at the expense of neighboring departments. Dead storage areas may be expanded into parking areas.

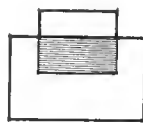
Any future expansion of the total capacity of the new City Hall would be accomplished at the most economical building cost by the construction of a separate wing requiring additional land. Such a wing has been proposed as an alternative addition to the present building program, to accommodate the School Committee and School Buildings Department.

A summary of the space requirements and building specifications for the proposed new City Hall is shown in Appendix D.

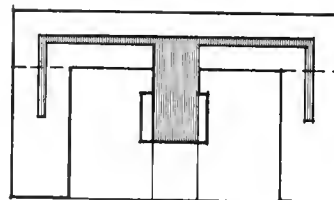
40



25 Floors



38 Floors

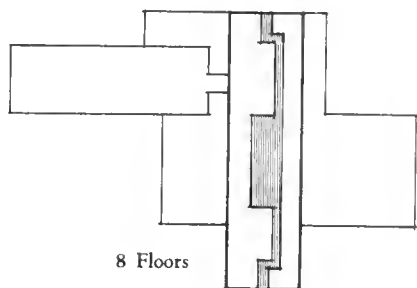


10 Floors

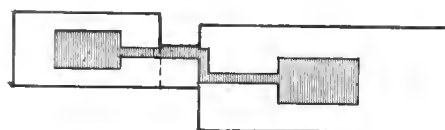
A COLGATE-PALMOLIVE
BUILDING — NEW YORK

B HOUSE OF SEAGRAM
NEW YORK CITY

C NEW ENGLAND MUTUAL
BUILDING — BOSTON

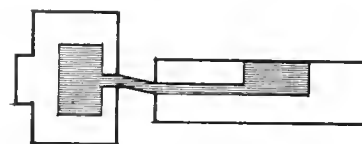


8 Floors



20 Floors

14 Floors



6 Floors

11 Floors

D POLICE HEADQUARTERS
LOS ANGELES

E CITY-COUNTY BUILDING
DETROIT

F CITY HALL AND ANNEX
BOSTON

NET/GROSS BUILDING AREA

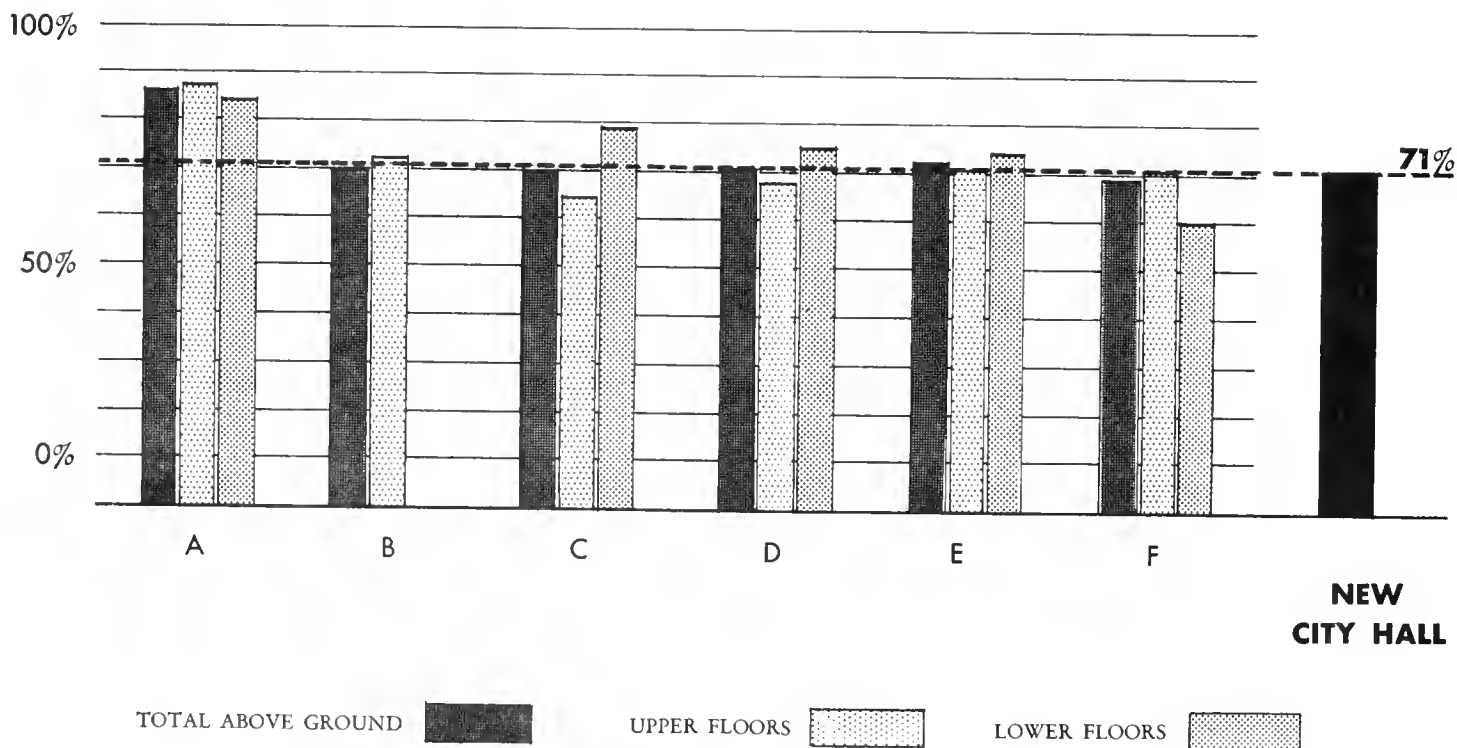


Figure 3

COMPARATIVE RATIOS OF NET OFFICE AREA TO GROSS BUILDING AREA

V. BUILDING COSTS AND OFFSETTING CREDITS

A. BUILDING COSTS

Given the estimated amounts and types of space required by the agencies in the basic program and the architectural-engineering specifications, the George A. Fuller Company, General Contractors, estimated the construction cost of the new City Hall at approximately \$10,900,000 or \$29.56 per gross square foot, at March 1958 prices. The cost of fees, furnishings, landscaping, etc., was estimated by Shepley, Bulfinch, Richardson and Abbott, Architects, at \$1,427,000. The total estimated building cost is therefore \$12,327,000. Some of the details of the estimates for the basic program are shown in Table VII.

The estimated total building cost is neither maximum nor minimum for the type of building visualized in this study. It might be possible to reduce this estimate by \$1-2 million if: (a) a less expensive outside finish is specified, (b) the quality of the inside finishing materials is reduced, (c) the allowance for new furnishings is decreased.¹ However, any great reduction of the inside finish would probably result in higher maintenance costs.

The additional cost of providing space in the new City Hall for the agencies included in the alternative additions to the basic program were estimated as follows:

Alternative A

Executive Staffs of the Fire Department and
Boston Traffic Commission; Licensing Board,
Boston Redevelopment Authority and Boston
Housing Authority

39,700 gross sq ft	\$1,174,000
Fees and Furnishings	<u>141,000</u>
Total Additional Building Cost	\$1,315,000

1. See Appendix E for a range of the costs of exterior wall treatments.

TABLE VIIESTIMATED BUILDING COST
BOSTON CITY HALLConstruction Cost

General Conditions (overhead, contractor's insurance, permits, field equipment, etc.)	\$ 300,000	
Excavation, Masonry, Concrete and Structural Steel	3,892,800	¹
Other Architectural Trades	2,364,200	
Heating, Ventilation and Air Conditioning	1,475,000	
Electrical Wiring and Fixtures	978,000	
Elevators	810,000	
Plumbing	280,000	
Commission	400,000	
Contingency	400,000	
Total Construction Cost		\$10,900,000 ²

Other Building Costs

Architectural and Engineering Fees, Surveys, Insurance, Bidding Costs and Miscellaneous Expenses	767,000	³
Furnishings	550,000	
Landscaping	50,000	
Clerk of the Works	35,000	
Decorative Arts	25,000	
Total		\$ 1,427,000

TOTAL BUILDING COST	<u>\$12,327,000</u>
---------------------	---------------------

1. Includes 100,000 square feet of exterior wall at \$13.50 per square foot.
2. \$29.56 per square and \$2.24 per cubic foot of gross floor space at March 1958 prices. Over the past several years, construction costs have risen about 5% per year. Excludes cost of site acquisition, site development and moving.
3. Excludes cost of site selection and establishing detailed program requirements.

Alternative BSchool Committee and School Building
Departments

100,500 gross sq ft	\$2,971,000
Fees and Furnishings	<u>357,000</u>
Total Additional Building Cost	\$3,328,000

B. OFFSETTING CREDITS

If the proposed new City Hall is constructed certain credits may accrue to the City, either immediately or over the life of the new building. These credits will offset, in part, the cost of land, building and financing. They include:

- (a) proceeds from the sale of vacated properties;
- (b) increase in tax revenues from the return of these properties to the tax rolls;
- (c) a proportion of any net increase in the City's tax base and revenues, stemming directly or indirectly from the Government Center Project;
- (d) savings in operating, repair and maintenance costs; and
- (e) rental charges on vacated leased properties.

The scope of this study does not include analysis of the effect of a new City Hall or the Center Project upon Boston's tax base or tax revenues. However, we have estimated other possible offsetting credits, as follows:

Basic Program

Proceeds from the sale of vacated properties:

<u>Properties</u>	<u>Estimated Fair Market Value</u> ¹
City Hall	\$ 400,000
City Hall Annex	1,100,000
Haymarket Square Building	<u>150,000</u>
	\$1,650,000

Savings in Operation and Maintenance ²

Annual Cost, Present Space	\$ 400,911
Estimated Cost, New City Hall	<u>370,950</u>
Estimated Annual Savings	\$ <u>29,961</u>

Discontinued Leases

Law Department, 11 Beacon Street	\$ 29,920
Veterans' Services Department, Cornhill Street	14,800
Graves Registration, 14 State Street	<u>5,720</u>
Annual Savings	\$ <u>50,440</u>

The savings in operating costs is conservative, since the highest commercial standards of maintenance for the new building are assumed.

The savings from operations and discontinued leases are annual figures. A straight projection of these estimates over a 25-year period indicates total savings of about \$2,000,000. The actual savings over this period may be considerably greater because the annual cost of operating, maintaining and repairing present facilities may rise at an increasing rate.

1. See Appendix A, Report of Consulting Appraisers. Valuations assume highest commercial use.

2. See Appendix F for detailed comparison by major items of expense.

If the agencies included in the two alternative additions to the basic program are housed in the new City Hall, the estimated offsetting credits are as follows:

Alternative A

Discontinued Leases

24 Province Street - Boston Licensing Board	\$ 12,055
73 Tremont Street - Boston Redevelopment Authority	8,800
230 Congress Street - Boston Housing Authority	27,645
141 Milk Street - Boston Housing Authority	<u>4,725</u>
Annual Savings	\$ <u>53,225</u>

Alternative B

Sale of Vacated Properties

15 Beacon Street - School Committee	\$360,000
45 Myrtle Street - School Committee	35,000
26-28 Normal Street - (School Buildings Department)	<u>150,000</u>
	<u>\$545,000</u>
Annual Savings in Operations and Maintenance	\$ 10,770

APPENDIX A

REPORT OF CONSULTING APPRAISERS

MARKET VALUE OF CITY-OWNED PROPERTIES

The appraisal team¹ has been requested to evaluate certain city-owned properties. The valuations given are as of the date of this report and are subject to normal market fluctuations occurring with the passage of time. Moreover, the valuations are what are known as "fair market valuations." Market value is defined as "the highest price estimated in terms of money which a property will bring if exposed for sale in the open market allowing a reasonable time to find a purchaser who buys with knowledge of all the uses to which it is adapted and for which it is capable of being used."

The appraisal team personally has inspected the following properties:

City Hall
City Hall Annex
Haymarket Square Relief Station
33 Beacon Street
15 Beacon Street
45 Myrtle Street
440 Brookline Avenue
26 Normal Street
West Newton Street (West Newton High School)

In arriving at our estimates of values, we have taken into consideration the following factors:

1. Location.
2. Size, shape and frontages of the lot.
3. Accessibility to transportation.
4. Highest and best land use.
5. Zoning.
6. Neighborhood trends.
7. Age of building.

1. Messrs. Joseph C. Skinner, Arthur P. Wilcox, and Thomas M. Horan; report submitted March 18, 1958.

8. Size of building.
9. Design of building.
10. Functions of building.
11. Condition of building.
12. Probable cost of demolition (assuming building of no value).
13. Current market conditions.
14. Trend of Boston tax rate.
15. Potential ability to produce net rental income.
16. Probable cost of rehabilitation required to produce income.
17. Comparable sales of land and/or buildings.

After considering all pertinent factors, with particular emphasis on the above, our valuations are as follows:

City Hall ¹	\$ 400,000
City Hall Annex	1,100,000
Haymarket Square	150,000
33 Beacon Street ²	75,000
15 Beacon Street	360,000
45 Myrtle Street	35,000
440 Brookline Avenue ³	190,000
26 Normal Street	150,000
West Newton Street ¹ (West Newton High School)	25,000

1. This figure assumes that the building has no value, and would be razed at the expense of the purchaser.

2. Assumes that the Parkman Bequest to the city permits outright sale of this building.

3. Assumes that zoning restrictions permit this building to be utilized in its highest and best use.

In considering the above properties, it is our opinion that the original City Hall building and the building on West Newton Street would undoubtedly be razed by any purchaser, as the structures appear to us to be liabilities. In addition, we believe it possible that the buildings at Haymarket Square and Myrtle Street might also be razed, depending on the uses to which these properties are put. In either event, the valuations established on the properties would be the same.

GENERAL CONDITION OF SELECTED CITY-OWNED SPACE AND ESTIMATED COST OF REHABILITATION

Under this item we shall endeavor to comment briefly about the several properties, citing the advantages or disadvantages, the general usability of the properties, and the cost of renovation, where feasible. Concise as the opinions rendered are, nevertheless, they reflect conclusions reached after careful examination of the properties, and the present and potential use of each.

CITY HALL

The existing building is functionally outmoded and is in marked violation of many elements of the present building code, including basic safety factors. From an operating point of view, the building is highly inefficient. Any estimate of the amount of deferred maintenance or the probable cost of renovation to modern standards, would be valueless. In the opinion of the appraisal team, this building has no value and should be demolished.

CITY HALL ANNEX

The building is easily adaptable for office use and is readily marketable if offered for sale. The dimensions of the building and the location of the principal services and facilities, particularly the modernized elevators, make possible efficient and potentially attractive office arrangements with maximum natural daylight and minimum waste of space. In spite of considerable obsolescence and deferred maintenance, the potential of the building is well demonstrated by the recently completed modernization of the Building Department quarters on the ninth floor.

It is our opinion that the modernization of the entire building could be completed, including new flooring, lighting, acoustical ceilings, toilets, wiring, heating and air conditioning for an estimated one million dollars.

HAYMARKET SQUARE

This well located property could be renovated and adapted to numerous uses. Also, the prominent location might well be of interest to some purchaser interested in a different land use. Presently, the building reflects deferred maintenance and consequently would require at least \$75,000 to put into moderately good condition.

33 BEACON STREET

This property is an excellent example of one of Boston's older but most attractive Beacon Hill residences. Its present use by the Park Department appears to be most satisfactory, if the interior condition, facilities and layout are considered. Property would be readily marketable. The location is desirable from the standpoint of many small office users.

15 BEACON STREET

This structure is a conventional office building and as such is readily marketable, although the location is rated as secondary. Basically, the structure appears in sound condition. The recent conversion to alternating current for all power uses except elevator and to Edison steam for heating are steps in the right direction. A modernization program would involve major changes, however, notably: new toilets, new lighting, new flooring, some air conditioning, the enclosing of stairway and elevator shafts, and perfecting an adequate fire exit. The estimated cost of such work completed to specifications consistent with the location of the building is \$300,000.

45 MYRTLE STREET

This building of four levels is of second class construction and presently reflects long deferred maintenance. The classrooms in this former school are currently used as office area, not too efficiently as they seem much too large for the use. The future value of the building is very questionable from the standpoint of city use or other use, due both to the location and the extensive renovation required for normal use.

440 BROOKLINE AVENUE

This one-story and part basement brick building containing approximately 37,500 square feet of floor space seems to be a satisfactory supply house for the School Department. The undercover loading dock, adjacent vacant land, and general facilities make this property adaptable for many diverse uses.

26 NORMAN STREET

It is our opinion that this building could be completely renovated and utilized efficiently by some department of the city. The structure appears reasonably sound, has large floor areas, freight and passenger elevators, etc. Photographs of adjoining floors of this building attest to the improvement possible through renovation. If the property were to be renovated, it would be imperative to acquire additional land for parking, through condemnation, if necessary.

The character of the immediate neighborhood is very poor, with slum clearance definitely in order.

The location of the property - between the proposed West End Development and the Government Center, and with the North Station a few minutes' distance, is good. A modest renovation program would cost \$250,000, exclusive of additional land costs.

WEST NEWTON STREET

It is our opinion that this school building should be razed to obviate further vandalism, and as a general consideration to the neighborhood. Vacant property of this size causes a definite deterioration in any neighborhood.

INITIAL CLASSIFICATION OF BOSTON CITY DEPARTMENTS AND ACTIVITIES
BY CENTRAL LOCATION CATEGORIES

<u>Departments and Activities</u>	<u>Present Location</u>	<u>Central Location Categories</u>		
		<u>I. Recommended</u>	<u>II. Recommended if Efficient</u>	<u>III. Not Recommended</u>
Mayor's Office	City Hall	x		
City Clerk Department	City Hall	x		
Licensing Division	City Hall	x		
City Council	City Hall	x		
Administrative Services Department Printing Division	City Hall 174 North Street	x		x
Assessing Department	Annex	x		
Auditing Department	Annex	x		
Boston Retirement Board	City Hall	x		
Boston Traffic Commission, Executive Staff	112 Southampton Street		x	
Building Department	Annex	x		
City Planning Department	Annex	x		
City Record	City Hall	x		

APPENDIX B (Continued)

<u>Departments and Activities</u>	<u>Present Location</u>	<u>Central Location Categories</u>		
		<u>I. Recommended</u>	<u>II. Recommended if Efficient</u>	<u>III. Not Recommended</u>
Civil Defense	115 Southampton Street		x	
Election Department	Annex	x		
Fire Department, Executive Headquarters	115 Southampton Street		x	
Health Department Health Division Registry Division Weights & Measures Division	Haymarket Square Annex Annex	x x x		
Hospital Department	818 Harrison Avenue			x
Law Department Workmen's Compensation	11 Beacon Street Annex	x x		
Library Department	Library Building Copley Square			x
Parks and Recreation Dept. Executive and Adminis- trative Staff	33 Beacon Street		x	
Penal Institutions Department	Annex	x		
Police Department, Headquarters	154 Berkeley Street			x
Public Works Department	Annex	x		

Departments and Activities	Present Location	Central Location Categories		
		I. Recommended	II. Recommended if Efficient	III. Not Recommended
Real Property Department				
Property Division	Annex	x		
Buildings Division	Annex	x		
Market Division	Quincy Market			x
Treasury Department				
Treasury Division	Annex	x		
Collecting Division	City Hall	x		
Collecting Division (Water)	Annex	x		
Veterans' Services Department	18 Cornhill	x		
Graves Registration	10 State Street	x		
Welfare Department	43 Hawkins Street			x
School Committee	15 Beacon Street		x	
	45 Myrtle Street (annex)		x	
Supply	440 Brookline Avenue		x	
School Buildings Department	26-28 Norman Street		x	
Storage	West Newton Street			x
Boston Redevelopment Authority	73 Tremont Street		x	
Boston Housing Authority	230 Congress Street		x	
Boston Finance Commission	24 School Street			x
Boston Licensing Board	24 Province Street		x	

APPENDIX C

SOURCES OF SPACE ALLOWANCES SHOWN IN FIGURE 2

Government

- A. Circular No. 65, General Services Administration, Public Buildings Service (Washington 25, D. C.), May 29, 1953, p. 10.
- B. "Space Requirements Survey, " New York State Executive Department, Division of the Budget, Division of Standards and Purchase, State of New York Department of Public Works (Albany 1, N. Y.), 1950.
- C. Occupancy Guide, Bureau of Old Age and Survivors Insurance, District Offices, Department of Health, Education and Welfare, General Services Administration, Public Buildings Service, Office of Planning (Washington 25, D. C.), November 1957.
- D. Occupancy Guide, Federal Housing Administration Insuring Offices, General Services Administration, Public Buildings Service, Office of Planning (Washington 25, D. C.), June 1957.
- E. Occupancy Guide, U. S. Secret Service Field Offices, Department of the Treasury, General Services Administration, Public Buildings Service, Office of Planning (Washington 25, D. C.), September 1957.
- F. City Hall and Square, Toronto, Canada, Conditions of Competition, Mayor's Office (Toronto), 1957.
- G. Floor Plans, City County Building, Detroit, Michigan, Harley, Ellington, and Day, Architects and Engineers.

Commercial

- H. Office Standards and Planning Book (compiled from practices of a large number of business concerns), C. W. Simpson, Art Metal Construction Co. (Jamestown, New York), tenth revised printing 1954.
- I. Office Management, Principles and Practices, John W. Neuner and Benjamin R. Haynes, Southwestern Publishing, Inc. (New Rochelle, N. Y.), third edition, 1953.

- J. Office Planning and Layout, Wood Office Furniture Institute (730 Eleventh St. N.W., Washington 1, D. C.).
- K. How to Plan Your Office Layout, National Stationery and Office Equipment Association (740 Investment Building, Washington 5, D. C.), copyright 1953.
- L. "Management Takes a New Look at the Office," Dun's Review and Modern Industry (99 Church Street, N. Y.), October 1957, p. 5, reprint from The American Office: Today and Tomorrow, October 1957.
- M. "Office Space Assignments," NOMA Office Standard, National Office Management Association (132 West Cheltenham Ave., Phila. 44, Pa.), March 1953.
- N. "Who Gets What Office?", Architectural Forum, February 1957.

APPENDIX D

SUMMARY OF SPACE REQUIREMENTS AND BUILDING SPECIFICATIONS FOR A NEW BOSTON CITY HALL

<u>Building Population:</u>	1,249 Employees <u>1,000</u> Visitors (estimated maximum)
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TOTAL: 2,249

<u>Gross Area:</u>	275,730 sq ft Aboveground <u>93,000</u> sq ft Basements
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TOTAL: 368,730 sq ft

<u>Gross Cube:</u>	TOTAL: 4,865,000 cu ft
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Building Construction:

Foundations	Concrete piles - 40 ft
Frame	Structural steel
Exterior Walls	Stone with clay tile backup
Windows	Bronze reversible with plate glass
Floors	Cellular steel, concrete fill, and plastic asbestos tile (typical)
Partitions	Movable metal
Ceilings	Integrated acoustic, lighting, air conditioning diffusers
Heating	Edison Company steam supply
Air Conditioning	Entire building
Electrical	Including 20,000 sq ft of automatic business machines

Building Construction: (Continued)

Elevators	Eight (8) fully automatic passenger elevators One (1) freight elevator
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Special Finishes	As noted below.
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Aboveground Space:

1. General Office Area:

(plastic asbestos floors, movable metal partitions, integrated lighting, air conditioning and acoustic ceiling)

a) Executive, 22 offices	8,800 sq ft
b) Administrative, 65 offices	13,000 sq ft
c) Supervisory	10,600 sq ft
d) Clerical	58,050 sq ft
e) Technical	11,430 sq ft
f) <u>Field Service</u>	<u>7,850 sq ft</u>

TOTAL:	109,730 sq ft
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2. Major's Office and City Council:

a) Major's Office (oak flooring, walnut walls, acoustic plaster ceiling)	7,400 sq ft
b) City Council (plastic asbestos tile flooring, walnut walls, acoustic ceiling; Council Chamber Gallery: 300 seats, special railings)	<u>12,600 sq ft</u>

TOTAL:	20,000 sq ft
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3. Public Access: (similar to office)	7,500 sq ft
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4. Conference and Hearing Rooms: (plastic asbestos floors, oak paneling, acoustic ceilings)	6,300 sq ft
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5. Special Purpose Space: (20 vaults, laboratories, teller cages, etc.)	7,800 sq ft
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6. Live Storage and Equipment: (similar to General Office)	<u>45,400 sq ft</u>
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TOTAL NET OFFICE SPACE:	<u>196,730 sq ft</u>
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Aboveground Space: (Continued)

Total Public Area, 40% of Net Area: 79,000 sq ft
 (including: Main Hall, 10,000 sq ft
 inlaid terrazzo floor, special marble
 walls, special acoustic ceiling;
 Lobbies, 7,500 sq ft, terrazzo,
 marble, acoustic tile)

TOTAL GROSS AREA, ABOVEGROUND: 275,730 sq ft

Basement Space:

1. Dead Storage 40,000 sq ft
 2. Space for 100 City-Owned Cars 30,000 sq ft
 3. Service and Receiving 3,000 sq ft
 4. Mechanical 20,000 sq ft

TOTAL BASEMENT AREA: 93,000 sq ft
 ABOVEGROUND AREA: 275,730 sq ft

TOTAL BUILDING AREA: 368,730 sq ft

ALTERNATIVE ADDITIONS:

- A. Space allowance for executive staffs of Boston Traffic Commission and Fire Department; Licensing Board, Boston Redevelopment Authority and Boston Housing Authority:

Net Office Area 27,500 sq ft
 Plus 40% 11,000 sq ft

Gross Office Area 38,500 sq ft

Dead Storage 1,200 sq ft

39,700 sq ft

Alternative Additions: (Continued)B. School Committee and School Buildings Department,
excluding Supply Room and Dead Storage:

Net Office Area	71,800 sq ft	
Plus 40%	28,700 sq ft	
<hr/>		
Gross Office Area		100,500 sq ft

Summary of Alternatives:

Alternate A	38,500 sq ft	
Dead Storage	1,200 sq ft	
Alternate B	100,500 sq ft	
<hr/>		
TOTAL GROSS AREA		<u>140,200 sq ft</u>

Note: Alternate B (100,500 sq ft) is assumed to be a separate wing five (5) floors high, 20,000 sq ft per floor, including typical office finished, separate air conditioning system, two (2) passenger and one (1) freight elevator.

Alternate A will be included in the main building.

APPENDIX E

CURRENT APPROXIMATE UNIT PRICES¹ FOR ALTERNATIVE EXTERIOR WALL TREATMENTS FOR A NEW CITY HALL

70% Special fixed plate glass, 30% bronze spandrels, bronze framing (House of Seagram, N. Y. C.)	\$18. 00 per sq ft
50% Marble, 50% reversible pivoting bronze windows and plate (New Boston City Hall, basic price)	13. 50 per sq ft
100% Fixed plate glass in stainless steel framing (Lever House, N. Y. C.)	11. 00 per sq ft
50% Sandstone, 50% aluminum span- drels and projecting windows (John Hancock Building, Boston)	8. 00 per sq ft

1. Reported by the George A. Fuller Company. These prices represent the maximum cost range of wall treatments.

APPENDIX F

OPERATING, MAINTENANCE AND RENTAL COSTS OF PRESENT MUNICIPAL SPACE¹
COMPARED WITH PROPOSED NEW CITY HALL

Expense Items	Buildings Owned			Haymarket Square Building	Buildings Rented	Total Expenses 1957	Estimated Expenses New City Hall
	City Hall	City Hall Annex					
Air Conditioning							
Alteration ² , Maintenance and							
Repairs	\$23,039.40	\$ 47,366.38	\$ 3,321.65			\$ 73,727.43	\$ 22,000.00
Electricity	(Charged to Annex)	49,270.67	2,809.22		\$ 182.08	52,261.97	41,250.00
Elevators	7,777.61	25,737.48	629.13			34,144.22	27,500.00
Heating and Hot Water	(Charged to Annex)	36,234.31	1,946.75			38,181.06	30,250.00
Inter-building Transportation	42.00	1,414.42	0.00			1,456.42	--
Janitorial (Clearing)	51,396.25	103,739.70	21,487.50		5,056.00	181,679.45	192,200.00
Operating Supplies & Equipment	1,149.64	6,585.58	222.82			7,958.04	
Plumbing	2,025.53	1,677.54	2,750.37			6,453.44	5,500.00
Window Cleaning	(Charged to Annex)	800.00				800.00	11,000.00
General Expense	1,364.28	2,585.18	299.50			4,248.96	--
Total Expense	\$86,794.71	\$275,411.26	\$33,466.94		\$5,238.08	\$400,910.99	\$370,950.00
Rental.							
1. Law Department, 11 Beacon Street						\$ 29,920.00	
2. Veterans' Services, Cornhill Street						14,800.00	
3. Graves Registration, 14 State Street						5,720.00	
					Total Annual Rent	\$ 50,440.00	

1. For agencies included in basic building program.

2. Alteration includes some long-term capital investment.

Source: Present Costs; Building Division, Real Property Department.
 Estimated for new building; appraisal team.

